

An optical transmitter for use in an optical transmitting system based on PDS (Passive Double Star) technology, does not erroneously output an optical signal when the optical transmitter is powered on/off. The optical transmitter has a current source 1 for outputting a drive current having a magnitude corresponding to an input control signal, a Laser diode (LD) for generating an optical output signal based on the received drive current, a modulator 9 for controlling the supply and cutoff of the drive current to the Laser diode (LD), a source voltage detector 3 for monitoring a source voltage to detect whether the source voltage is lower than a predetermined voltage, and a switch circuit 4 for outputting a control signal to the current source 1 to stop the supply of the drive current when the source voltage is determined to be lower than the predetermined voltage.